Recommendations Regarding Affordability and Sustainability of the State's Drinking Water Systems

A Report to the Washington State Department of Health,
Office of Drinking Water

October 2003

DOH PUB. #331-241

WASHINGTON
WATER SUPPLY ADVISORY COMMITTEE

Recommendations Regarding Affordability and Sustainability of the State's Drinking Water Systems

A Report to the Washington State Department of Health, Office of Drinking Water

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Mary Selecky
Secretary of Health

Rich Hoey
Acting Director, Office of Drinking Water

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October 23, 2003

Rich Hoey, Acting Director
Department of Health
Office of Drinking Water
PO Box 47822
Olympia, Washington 98504-7822

Dear Mr. Hoey:

I am pleased to provide you with a report from the Washington Water Supply Advisory Committee (WSAC) regarding the issues of affordability and sustainability of the state's drinking water systems. Specifically this report contains recommendations to address affordability and sustainability concerns within Washington State.

This report was prepared by a subcommittee of the WSAC in response to a request from the Office of Drinking Water (DW) to review the existing state's drinking water program for dealing with the issues of affordability and sustainability. The subcommittee met three times in the spring of 2003 and was assisted by DW staff in conducting a review of the extensive past and present efforts to address these issues. The recommendations endorsed by the full WSAC on July 10, 2003 are:

1. DW should take steps to improve the compliance of water systems with the existing Water System Plan requirements and financial aspects defined in WAC 246-290-100.

2. DW should take steps to improve the compliance of water systems with the existing small water system management program requirements and financial aspects defined in WAC 246-290-105.

3. DW should examine its authority to regulate water system financial viability to determine if additional authorities such as a requirement for reserve accounts are needed to improve water system financial viability.

4. DW should explore/improve restructuring options by developing incentives and removing barriers (i.e. funding) for Satellite Management Agencies to take over the ownership and operation of non viable small water systems, and promoting other restructuring options (mergers and acquisitions).

5. DW should take the steps necessary to require that the compliance and financial status of the water system serving a residence be incorporated into the real estate disclosure statement required to be completed by the seller of the property.

6. DW should research the income levels associated with small systems in different parts of the state to better define the affordability problem.

Background information on the basis of the recommendations and possible steps to implement the recommendations are included in the body of the report. It is important to note that HB 1338, which provides DW with additional funding, authorities, and responsibilities, was signed by Governor Gary Locke just prior to conclusion of the subcommittee's deliberations. The WSAC recommends that DW evaluate how the newly approved legislation may expand the opportunities for implementing the recommendations herein.

We encourage you to consider implementation of these recommendations as you develop your work plans for the coming months and would appreciate a report on your response to the recommendations at your first meeting in 2004. We appreciate the opportunity to work with your staff in our continuing joint efforts to provide for public health protection by assuring safe, reliable drinking water for the citizens of Washington. Please contact me or other committee members if you would like additional information about the contents of this report. I can be reached at (360) 462-9287.

Sincerely,

Gary Rhoades
Chair, Washington Water Supply Advisory Committee

cc: Mary Selecky, Secretary, Department of Health
Gregg Grunenfelder, Acting Chief Administrator, Division of Environmental Health
Denise Clifford, Manager, Office of Drinking Water
Richard Siffert, Manager, Office of Drinking Water
William Thurston, Environmental Engineer, Office of Drinking Water

About the Washington Water Supply Advisory Committee

The Water Supply Advisory Committee (WSAC) was formed by the Legislature in 1995 (RCW 70.119A.160). The Legislature directed the WSAC to "provide advice to the department on the organization, functions, service delivery methods, and funding of the drinking water program." The WSAC represents a range of drinking water interests - including utility owners and operators, consumers and environmental advocates – and advises the Washington State Department of Health in its mission to protect the health of Washington citizens by assuring safe, reliable drinking water.

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- Gary Rhoades, Chair
- Bob Pancoast, Vice Chair
- John Kounts
- Alan Medak
- Skip Richards
- Lorna Parent
- Judy Turpin
- Hal Schlomann

Affordability and Sustainability Subcommittee Members

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- Gary Rhoades, Evergreen Rural Water of WA
- Cas Hancock, Cas Hancock & Associates
- Hal Schlomann, WA Assn of Sewer & Water Districts
- John Kounts, Washington PUD Association
- Denise D. Smith, League of Women Voters
- Drew Noble
- Lorna Parent, Skagit County Health
- Gene Eckhardt, WA Utilities and Transportation Commission

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- Richard Siffert, Manager
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WA Assn of Sewer and Water Districts

Denise D. Smith
League of Women Voters

Judy Turpin
WA Environmental Council

The Honorable Jim Wall
Commissioner Chelan Co PUD

The Honorable James West
Washington State Senator

Dave Williams
Association of WA Cities

Spiro E. Xenos II
The Boeing Company

Executive Summary

Background

Drinking water systems in Washington are faced with increasing costs associated with new and upcoming regulations, the need to replace aging infrastructure, and to build new facilities to accommodate growth. Washington also has a high proportion of small water systems in Washington that typically are more heavily burdened by these increasing costs than larger systems. Systems unable to afford such costs are not likely to be able to continue providing their customers with a safe and reliable drinking water necessary for the protection of public health. This combination of circumstances points to the need to continually re-evaluate existing efforts and identify new opportunities to deal with the issues of affordability and sustainability of water systems in the state.

At the request of the Department of Health, Office of Drinking Water (DW), the Washington Water Supply Advisory Committee (WSAC) established a subcommittee in 2002 to review the existing state's drinking water program for dealing with the issues of affordability and sustainability. This report contains a set of recommendations based on a review of previous and present state programs and efforts of DW to address affordability and sustainability concerns. The recommendations contained in this report are based on a set of principles derived from a broader set of guiding principles previously developed by the full committee.[1]

In conducting the review, the subcommittee used a definition of affordability and sustainability described in an American Water Works Association briefing paper[2]:

> An affordable water rate can be defined as a charge for water service that the consumer is able to pay without jeopardizing the consumer's ability to pay for other necessities (food, shelter, other utility services, medical care, clothing, and transportation).
> …….
> While affordability is based on the customer's ability to pay for water service, sustainability looks at the water utility's ability to meet its operating, maintenance, and capital needs through the rates that it charges.

The following six recommendations developed by the subcommittee and endorsed by the full WSAC are submitted to DW for consideration. Background information, status, and steps for implementation of these recommendations are provided in the Recommendations section of this report.

[1] Appendix B: Guiding Principles
[2] Appendix C: American Water Works Association Beiefing Paper

Summary of Recommendations

1. DW should take steps to improve the compliance of water systems with the existing Water System Plan requirements and financial aspects defined in WAC 246-290-100.

2. DW should take steps to improve the compliance of water systems with the existing small water system management program requirements and financial aspects defined in WAC 246-290-105.

3. DW should examine its authority to regulate water system financial viability to determine if additional authorities such as a requirement for reserve accounts are needed to improve water system financial viability.

4. DW should explore/improve restructuring options by developing incentives and removing barriers (i.e. funding) for Satellite Management Agencies to take over the ownership and operation of non viable small water systems and promoting other restructuring options (mergers and acquisitions).

5. DW should take the steps necessary to require that the compliance and financial status of the water system serving a residence be incorporated into the real estate disclosure statement required to be completed by the seller of the property.

6. DW should research the income levels associated with small systems in different parts of the state to better define the affordability problem.

Problem Statement – Why the Subcommittee was Established

Background

The issues of affordability and sustainability as related to public water systems are not new, but they received a significant increase in attention following additional regulatory requirements resulting from the 1986 Safe Drinking Water Act amendments. The adoption of national surface water treatment requirements, and increased monitoring and chemical maximum contaminant levels resulted in higher costs for many water systems.

To help address the affordability and sustainability issues, Washington's DOH undertook extensive efforts in the late 1980's and early 1990's to assist existing water systems improve their financial, managerial, and technical capability to meet the new public health requirements. Measures were also taken to prevent establishment of new water systems unless adequately planned, designed, constructed, and financed to ensure they would be viable. New planning and financial viability requirements, requirements to obtain service from existing water systems rather than forming new systems, provision of technical assistance and active and early participation in the State Revolving Fund Program to provide financial assistance are among the steps the state has taken to address the issues of public water system affordability and sustainability.

Current Situation

Despite these measures, the financial problems faced by many water systems remain and are likely to increase. The increase in regulatory requirements has continued following the more recent 1996 Safe Drinking Water Act amendments. The recently adopted Disinfectants / Disinfection Byproduct rule will affect about 1,100 Group A water systems (water systems subject to federal regulations) in the state that disinfect their water. The new arsenic standard will impact an estimated 208 water systems in the state, and the Long Term 1 Enhanced Surface Water Treatment Rule will impose more stringent requirements on about 125 small water systems using surface water sources. And still more regulations are in the national regulatory pipeline including additional requirements for groundwater systems, increasingly stringent surface water treatment regulations, and additional Disinfectants / Disinfection Byproduct rules.

In addition to the increased costs associated with new regulatory requirements, many water systems must fund replacement of aging infrastructure, upgrade existing facilities to meet current design standards, develop new sources and construct new distribution and storage to accommodate growth. The Community Water System Survey 2000 recently published by the Environmental Protection Agency, found that as a national average, only 20 percent of the capital investments in the past five years by water systems was for water quality improvement. The remaining 80 percent of the capital investments were for distribution, transmission, storage, land, source, and other facilities.

Affordability and sustainability issues are not limited to small water systems. However, it has been well documented that small systems typically face the heaviest burden in dealing with the increasing cost of meeting regulatory requirements. One example is the situation faced by systems which will be required to install treatment to reduce arsenic levels as shown in Table 1. The cost per customer associated with installation and ongoing operation and maintenance of the various treatment options is considerably greater for the small systems. To install and operate ion exchange, customers on a system serving 50 connections face an increased cost of about $30.00/month while the increase for those on a system serving 500 connections would be about $10.00/month.

A small water system in Chelan County known as Tract C Minneapolis Beach Home Owners Association provides a more specific example of the rate increases driven by new regulatory requirements. The system has 16 connections with Lake Chelan as its source. Prior to the surface water treatment rule, the system pumped water directly from Lake Chelan without filtering. In order to meet the surface water treatment rule, the water system was required to install filtration equipment and has installed bag filters. To pay for the capital cost of the equipment and increased operational and maintenance expenses, the costs per connection have gone from $25.00/month to $70.00/month.

Furthermore, the system is likely to be faced with even more costs in order to meet the requirements of the Long Term 1 Enhanced Surface Water Treatment Rule, which deals with *Cryptosporidium*. Bag filters do not currently meet Environmental Protection Agency's removal requirements for *Cryptosporidium*; therefore the system may have to install additional filtration equipment in the future. Other small Group A systems around the state are faced with similar problems.

A broader indication that affordability and sustainability issues are still a current issue is the trend in water rates in Washington. Water rate data from surveys of cities and utility districts conducted since 1985 is summarized in Chart 1. The data indicates that water rates have increased at about twice the rate of inflation. The fact that water rates have increased faster than inflation during this time period suggests that affordability and sustainability may be more of an issue now than in the late 1980's.

Washington may have more affordability and sustainability issues than many states due to high proportion of small systems. Although Washington is 15th in population, it ranks 7th in terms of number of community and non-transient non-community Group A public water systems. These statistics indicate that Washington has a higher percentage of smaller water systems than the average state. The issues take on even greater significance when the nearly 13,000[3] Group B systems (water systems regulated by the state, but not subject to federal regulations) in the state are taken into consideration as Washington regulates systems of much smaller size than many other states.

Problem Statement Summary

The ever increasing costs associated with new and upcoming regulations combined with the need to replace aging infrastructure and build new facilities to accommodate growth, as well as the high proportion of small water systems in Washington, points to the need to re-evaluate existing efforts and identify new opportunities to deal with the issues of affordability and sustainability. The Affordability and Sustainability Subcommittee was established to assist DW in conducting such evaluation and providing recommendations for additional steps DW should consider.

[3] Appendix D: Selected Statistics – Washington Water Systems

Table 1 Comparative Costs for Arsenic Treatment Options 30 gpm and 300 gpm

	30 GPM Treatment Plant (50 households)				300 GPM Treatment Plant (500 households)			
Technology	Capital Cost $1000	Annual O&M Cost $1000	Total Annual Cost $1000	Annual Cost $/Connection	Capital Cost $1000	Annual O&M Cost $1000	Total Annual Cost $1000	Annual Cost $/Connection
Ion Exchange	99	12	18	360	364	35	57	114
Activated Alumina	87	11	16	320	308	53	72	144
Iron Based Sorbents	75	10	15	300	326	50	70	140
Oxidation/Filtration	72	8	12	240	460	9	41	82
Oxidation/Filtration with iron addition	78	11	16	320	490	15	48	96
Point of Use	59	12	16	320	520	105	136	272

Notes:

1. Capital and operation and maintenance (O&M) costs for central treatment derived from Department of Health's guidance document Arsenic Treatment for Small Systems, March 2003, using an assumption that average daily demand is about ½ of maximum daily demand.

2. Total Annual Cost is annual O&M cost plus annual cost of retirement of a loan for the capital cost at 1.5 percent for 20 years.

3. Additional O&M costs for iron addition are estimated to be 7 percent of capital cost.

4. Capital cost estimates include an additional 50 percent of the costs derived from the cost curves in the Department of Health guidance for 30 gpm systems and 40 percent for the 300 gpm systems. The additional costs are estimates to cover such items as contingencies, taxes, mobilization, and inspections.

5. The annual O&M cost for the 300 gpm systems using oxidation/filtration includes an additional 10 percent of the costs taken from the guidance document for residual waste disposal.

6. Cost per connection assumes a maximum daily demand of 800gpd/connection.

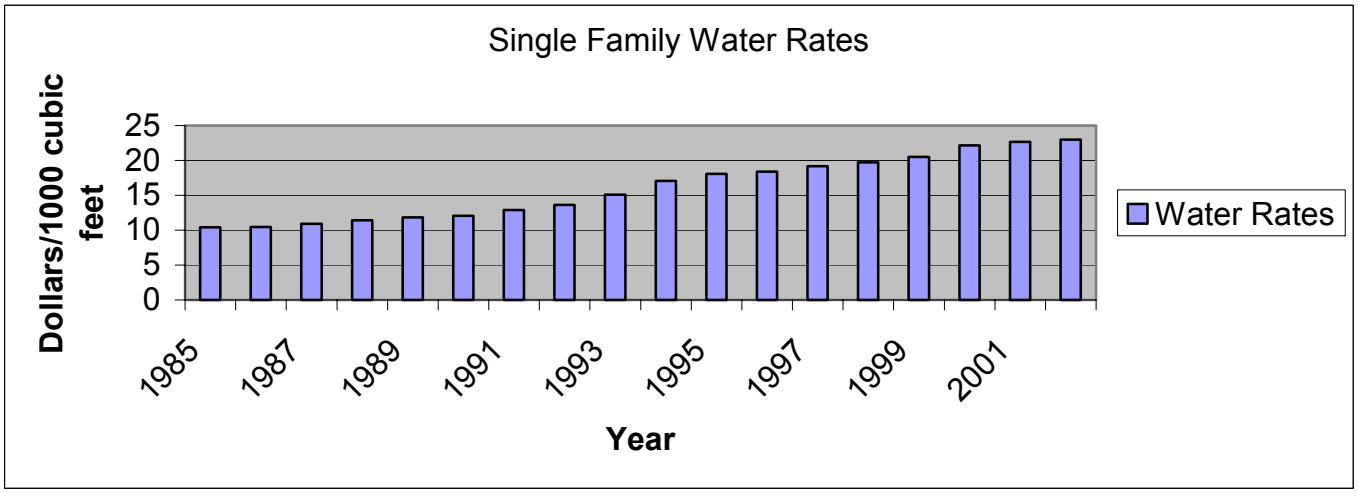
7. POU costs developed from Environmental Protection Agency's Technologies and Costs for Removal of Arsenic from Drinking Water, December 2000 and using the following assumptions.

    - Point of Use's will need to be replaced every 5 years.

    - Replacement costs will be 70 percent of initial installation and capital costs as replacement will not require new meters, valves and plumbing costs associated with the initial installation. Three replacements will be needed (in years 5, 10, and 15) to compare with the 20 year time frame used for centralized treatment costs.

    - Funds borrowed for replacement of Point of Use units will be invested to capture inflationary increases over the 15 year period at 3 percent per annum.

Chart 1 Washington City and Utility District Water Rates



Notes and Observations:

1. According to data from BLS, the CPI (U) increased 67 percent from 1985 to 2002. The AWC survey results charted above indicate water rates have increased about 130 percent (from $10 to $23) during the same period, i.e. water rates have increased at about twice the rate of inflation.

2. Rates are taken from the AWC 2002 Tax & User Fee Survey, Water, Sewer & Stormwater Fee Survey, Part IV and predecessor documents back to 1985. The rates shown are monthly rates for a single family residence within the jurisdictional boundaries and based on use of 1000 cubic feet/month.

3. The 1985 – 1987 data was based on a survey of 37 cities each serving more than 10,000.

4. The 1988 and 1989 surveys were to expanded to included selected water districts representing a total of 65 cities and utilities.

5. The 1990 survey was expanded to include all 268 cities and 28 PUDs. Responses were received from 199 cities and utilities.

6. The 1991 survey was expanded again to include all PUDs and cities. A total of 314 responded.

7. The 1992 survey included responses from 368 cities and agencies.

8. In 2002 the survey was mailed to 390 cities and utility districts, but only 173 agencies responded.

Process Used by Subcommittee

The subcommittee met three times over the course of four months to conduct the review and develop the recommendations for consideration by the WSAC. DW staff assisted the subcommittee by developing a work plan[4], providing background information on existing programs, the status of implementation, and drafting materials for subcommittee consideration. A summary of the information developed by reviewing existing documents and programs provided to the subcommittee can be found in Appendix F and Appendix G.

The subcommittee considered 63 possible recommendations[5] for improving water system affordability and sustainability. After thorough discussion, the subcommittee arrived at six proposed recommendations that all members supported and agreed should be submitted to the full WSAC for consideration. At the July 10, 2003 meeting of the full WSAC, the recommendations were discussed and endorsed with minor modifications. The recommendations provided herein are the result of that process. Each recommendation includes background information, a discussion of the current status, and observations about the relevant program, and potential steps DW could take to implement the recommendations.

Recommendations

Significant water rights legislation, HB 1338, which provides the Department of Health with additional funding, responsibilities, and authorities, was passed just prior to the completion of the subcommittee's deliberations. The subcommittee was not able to conduct a thorough review of the legislation prior to completion of this report, but advises the Department of Health to evaluate how the new requirements of HB 1338 may expand the opportunities for implementing the subcommittee's recommendations.

Recommendation 1

DW should take steps to improve the compliance of water systems with the existing Water System Plan (WSP) requirements and financial aspects defined in WAC 246-290-100.

Background

The WSP required by current regulations is designed to demonstrate that expanding systems have the operational, technical, managerial, and financial capability to achieve and maintain compliance with relevant local, state, and federal plans and regulations. The WSP:

- Is a comprehensive analysis of the water system that builds on an analysis of the existing system to provide an outline of future operation, maintenance, capital, and management needs.

[4] Appendix E: Affordability and Sustainability Workplan
[5] Appendix H: List of Recommendations Voted on May 13, 2003

- Includes a six-year budget that provides for collection of adequate revenues to fund capital and operation and maintenance costs, a plan for collecting the revenue to maintain cash flow stability, and to fund the capital improvement program and emergency improvements, and a discussion about the utility's and rate structure.

- Is used by DW as the measure for determining water system financial viability (i.e. the plan is used to meet the financial viability requirements pursuant to the operating permit (WAC 246-294-040(2)(f)).

- Is used by DW as a basis for approval of construction documents and project reports. Regulations require that the construction documents and project reports submitted be consistent with the WSP as a condition for DW approval. (WAC 246-290-110(3) and WAC 246-290-120(3).

Current Status and Observations

- Many systems required to have plans need to update their plans. Typically it is the smaller, expanding systems that do not have current plans and these same systems that have the majority of financial viability issues.

- Estimates from the first quarter of 2003 are that 62 percent of all expanding water systems are in compliance with the planning requirement and that 75 percent of those serving more than 1000 connections are in compliance.

- Since expanding water systems are required in most cases to get construction and project report approval from DW, the compliance statistics suggest that DW may in some instances be approving construction and project reports for which there is not a current WSP.

- The current level of staff resources devoted to plan technical assistance and plan review is limited. The current focus is directed towards plan reviews and approval of high priority (from a public health risk standpoint) systems.

- On-going technical assistance and plan oversight is very limited. DW assists water systems deal with major problems that arise at any time, but limited resources do not allow a proactive approach to ensure systems are implementing WSPs as a way of preventing problems from occurring.

- Water rates proposed as part of the WSP are not always approved by local officials, which sometimes results in under funding of planned improvements.

- If more plans were updated and kept current as required by existing regulations, there would likely be a higher degree of financial viability.

- If the DW periodically ensured (through some sort of technical assistance, or random audits, or other oversight) that the system was implementing their plan (including the rate structure) there would likely be a higher degree of financial viability.

Implementation of Recommendation

Improved compliance with the WSP regulations and emphasis on the utilities financial aspects would require one or more of the following:

- Redirection of existing and/or obtain additional DW FTE's and money for WSP development/review, and WAC revision if needed.
- Use of third parties for oversight of WSP development/review.
- More closely tie project approval with WSP and the financial aspects related to the plan and project.
- Require elected officials approval of WSP including the budget (would require WAC revision).
- Conducting random WSP audits and follow-up compliance actions for utilities not in compliance.
- Better education about the benefits of having a current and approved WSP (i.e. construction waiver).
- Using existing authorities to more consistently withhold approval of construction and project reports when WSP's are not current, along with education about the consequences of non-approval, e.g., the water system could not be expanded.
- Ensure that systems not meeting the water system planning requirements of WAC 246-290-100 are not issued a green operating permit.

Recommendation 2

DW should take steps to improve the compliance of water systems with the existing small water system management program (SWSMP) requirements and financial aspects defined in WAC 246-290-105.

Background

The primary purpose of SWSMP is to demonstrate the system's operational, technical, managerial, and financial capability to achieve and maintain compliance with relevant local, state, and federal plans and regulations. The SWSMP:

- Provides a thorough assessment of non-expanding systems.
- Includes a general budget.
- Pursuant to WAC 246-290-105, the program must be developed by all non-expanding systems and only submitted at the request of DW.

Current Status and Observations

- DW uses the plan as the only comprehensive means for determining financial viability (i.e. the program is a prerequisite for getting a State Revolving Fund loan).

- Currently, WSP is a criterion for the DW's Operating Permit Program but the SWSMP is not.

- DW planning staff estimates that compliance with the requirement to develop a SWSMP is low.

Implementation of Recommendation

Improved compliance with the SWSMP regulations and emphasis on the utilities financial aspects would require one or more of the following:

- Modifications of the current operating permit regulations (WAC 246-294-040) that define permit categories to add SWSMP as a criteria for obtaining a green permit (would require WAC revision).

- Require submittal of SWSMP for DW approval during sanitary survey review process (possible WAC revision).

- Additional technical assistance (DW and/or third party) would be needed by the small systems to complete the SWSMP.

- Revise SWSMP guidance to include short and long term overall financial assessment.

- Adding a box to the WFI form that would indicate if utility has completed SWSMP.

- Conducting random SWSMP audits and follow-up compliance actions for utilities not in compliance.

- Work with counties to promote/require SWSMP before obtaining building permit.

Recommendation 3

DW should examine its authority to regulate water system financial viability to determine if additional authorities such as a requirement for reserve accounts are needed to improve water system financial.

Background

DW currently has several regulatory requirements related to water system financial viability:

- WAC 246-290-100 and 246-290-105 require water systems completing WSP's and SWSMP's to include financial information to demonstrate financial viability.

- RCW 70.116.134 requires DW to adopt regulations for designating qualified Satellite Management Agencies (SMA). The criteria must include demonstration of financial integrity.

- WAC 246-295-050 requires financial viability information be included as an element of a SMA plan. Also states that DW may revoke, suspend, modify or deny an SMA, which fails to demonstrate financial viability.

- RCW 70.119A.060 includes the provision that no new public water system may be approved or created unless: it is owned or operated by an SMA and the SMA complies with financial viability requirements, or if a SMA is not available, it is determined that the new system has sufficient management and financial resources to provide safe and reliable service. It also provides that approval of new systems must be conditioned to meet DW financial viability requirements or be required to turn over operation and/or ownership to an SMA that may become available in the future.

- RCW 70.119A.100 states that DW shall conduct comprehensive and systematic evaluations to assess the adequacy and financial viability of water systems.

- WAC 246-294-040 operating permit criteria includes whether the water system has complied with the water system financial viability provisions of RCW 70.119A and WAC 246-290-100.

Current Status and Observations

- The authorities listed above do not specifically require reserve accounts to be established.

- DW has included creation of both an operating fund reserve and emergency fund reserve in its Financial Viability Manual for new and expanding small water systems.

- DW planning staff indicates that water systems often do not make the demonstration of adequate cash reserves for either operation or emergencies.

- Resource constraints have limited the ability of DW to fully utilize the existing authorities.

- DW oversight of water system financial viability could be improved by conducting an analysis related to each authority identified above and assessing DW's ability to implement each authority.

Implementation of Recommendation

- With provision of additional staff time, an expanded analysis and assessment of existing authorities could provide additional recommendations for dealing with affordability and sustainability issues. The analysis should include assessing the benefits of increasing resources to implement existing requirements, and possibly developing new requirements for WSP's/SWSMP's, Satellite Management, and/or Operating Permits.

- Disclosing financial information in Consumer Confidence Reports should be examined.

- Imposing financial requirements on contract operators should be examined.

- The benefits and potential problems of requiring reserve accounts should be evaluated.

Recommendation 4

DW should explore/improve restructuring options by developing incentives and removing barriers (i.e. funding) for SMA to take over the ownership and operation of non viable small water systems and promoting other restructuring options (mergers and acquisitions).

Background

- Current law (RCW 70.119.134) requires that DW not approve creation of a new water system unless that system is owned or operated by SMA. If a SMA is not available, DW is to condition the approval upon periodic review of the system and direct it to a SMA if the system is unable to meet DW financial viability requirements.

- DW has no current authority to require mergers or acquisitions.

Current Status and Observations

- Small water systems faced with compliance and financial issues need viable alternatives to deal with their problems.

- Removing barriers and increasing incentives for restructuring will lead to improved public health protection and financial viability.

- DW is using State Revolving Fund set-aside funds (loans) and recently passed legislation (grants) to resolve public health issues by funding feasibility studies and engineering reports needed to develop and implement restructuring.

- Some new systems are being created without prior coordination with an approved SMA.

- The condition of obtaining the services of a SMA, if financial viability and other operating requirements are not met, is not being identified in all cases at the time of system approval or enforced after the system has been approved.

- The incentive to take over the ownership or manage and operation of an existing small water system is lacking because of ongoing financial viability and operational problems.

- In some cases, existing SMA have not been designated as receivers for failing systems.

- All counties have not identified SMA.

- In the late 1990's DW founded an SMA Advisory Committee to clearly identify implementation issues and make recommendations. The SMA Committee report "Satellite Management Agency (SMA) Brainstorming Committee Final Report on Barriers to SMA Operations" dated July 1999 listed several recommendations on removing barriers and developing incentives and may still be relevant. Because of staff resource limitations, the recommendations have not been fully implemented.

- In 2003, the Legislature committed $4 million to assist municipal water systems acquire and rehabilitate public water systems that have water quality problems or have been allowed to deteriorate to a point where public health is an issue. DW, the Public Works Board, and the Department of Community, Trade, and Economic Development will jointly administer the new program and are working to develop a model infrastructure financing program. Program guidelines, policies, and additional information will be available in the fall of 2003.

<u>Implementation of Recommendation</u>

- With provision of additional staff resources, an analysis of the recommendations identified in the DW SMA Brainstorming Committee Final Report on Barriers to SMA operations should be completed. As a first step, DW should review the report in light of the passage of HB 1338 and assess how requirements of the bill could make the report recommendations more feasible to implement. Additional legislation or WAC revisions may be necessary to implement some recommendations in the report.

- For other restructuring options (mergers and acquisitions) DW should review existing requirements and make recommendations to improve incentives such as State Revolving Fund set-aside funding and remove barriers (i.e. streamline receivership process).

Recommendation 5

DW should take the steps necessary to require that the compliance and financial status of the water system serving a residence be incorporated into the real estate disclosure statement required to be completed by the seller of the property.

Background

Current real estate law (RCW 64.06.020) requires sellers of residential property to provide the buyer a disclosure statement containing certain information about the property. The current law requires limited information about the source of water for the property, but does not include the compliance or financial status of the water system.

Status and Observations

- DW currently has no involvement in the real estate disclosure statement.
- Water systems are required to provide customers with annual consumer confidence reports that include compliance information, but do not include financial information.
- By requiring key information in the disclosure statement about the system, including the compliance and financial status, prospective homeowners will have more information on which to make their decision to purchase the property.
- Requiring the disclosure of water system information to prospective buyers will serve as an incentive for the sellers to insist that the water system maintain compliance and financial viability, since the water system status can impact the property value.

Implementation of Recommendation

To evaluate current real estate laws and regulations and amend state law would require DW staff and/or contract funds to:

- Form an advisory committee, which includes real estate interests, to assist DW in proposing additional legislation and/or regulation amendments to require water system compliance and financial viability information in real estate disclosure and/or loan documents.

Recommendation 6

DW should research the income levels associated with small systems in different parts of the state to better define the affordability problem.

Background

DW currently uses 1.5 percent of the county median household income as the basis for determining household ability to pay existing and future water rates. State Revolving Fund interest rates are determined on the basis of number of households in the community below the

county median income level, and whether or not the county has been designated as economically distressed.

Status and Observations

- The county median household income as determined by the US Census bureau may not be the best measure of affordability in some communities such as those consisting primarily of retired residents on fixed incomes.

- Income levels in different regions of the state as determined by the US Census Data are quickly out of date as the survey is conducted only every ten years.

- More current and locally specific data could be used to focus on where restructuring activities and State Revolving Fund loan forgiveness should be applied.

- DW is currently considering how best to apply income level information to different DW programs related to financial viability (i.e. State Revolving Fund loan forgiveness).

Implementation of Recommendation

To research income levels and utilize the information would require DW staff and/or contract funds to:

- Investigate regulations or others ways to inventory income levels statewide (i.e. use USDA data).

- Develop a process (i.e. data system) for maintaining correct information on income levels.

Appendix A: Acronyms

AWWA	American Water Works Association
CAP	Capacity Assistance Program
CWSP	Coordinated Water System Plan
DOH	Department of Health
DW	Drinking Water
DWSRF	Drinking Water State Revolving Fund
Ecology	Department of Ecology
EPA	Environmental Protection Agency
FTE	Full Time Equivalence
FVT	Financial Viability Test
GPD	Gallons per Day
GPM	Gallons per Million
HB	House Bill
LHJ	Local Health Jurisdictions
MOU	Memorandum of Understanding
O&M	Operation and Maintenance
OP	Operating Permit
PWS	Public Water Systems
RCW	Revised Code of Washington
SDWA	Safe Drinking Water Act
SMA	Satellite Management Agency
SMP	Satellite Management Program
SRF	State Revolving Fund
SWSMP	Small Water System Management Program
UTC	Utilities and Transportation
WAC	Washington Administrative Code
WSAC	Water Supply Advisory Committee
WSP	Water System Plan

Appendix B: Guiding Principles

June 17, 2003

The Subcommittee has selected the following principles to guide the efforts related to affordability and sustainability. These principles are adapted from those previously established by the WSAC to guide how a comprehensive drinking water program should function:

- All consumers of drinking water from PWS should be assured of safe, reliable and affordable drinking water meeting basic public health protection standards.

- All levels of government have a collaborative responsibility for protecting public health through an effective drinking water program.

- State funding programs should provide assistance in a manner consistent with DOH objectives for achieving long-term financially responsible and well-managed systems (viability), preventing the proliferation of new nonviable systems, and financing restructuring activities by satellite managers and others.

- Prevention should be balanced with remediation in assuring drinking water quality:

    1. Remediation of significant health and safety problems already identified should take priority.
    2. When remediation is required, the responsible health authority should coordinate with other agencies to ensure that solutions are sustainable and environmentally compatible.
    3. Long-term future prevention efforts should be identified and funded at a level to minimize the need for remediation.

- Smaller water systems have unique characteristics that require tailored methods of assistance in order to reduce risk to human health from contamination of the drinking water they serve. Smaller water systems would benefit from training to assist them with:

    1. Achieving Compliance (Remediation).
    2. Remaining in Compliance.
    3. Restructuring/Consolidation.

- The Initiator/Standard Setter for this assistance should be DOH. Providers of training can come from a variety of sources including the private sector. Major areas of training should include, but not be limited to:

    1. Education/Awareness.
    2. Compliance Assistance.
    3. Financial Assistance.
    4. Alternative Technologies.
    5. Best Available/Affordable Technologies.

Appendix C: American Water Works Association Briefing Paper

ITEM 8A

Briefing Paper on Issues Relating to the Affordability and Sustainability of Rates for Water Service

Presented to the
Water Utility Council of the
American Water Works Association

June 2002

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1. What Are Affordability and Sustainability?

An affordable water rate can be defined as a charge for water service that the consumer is able to pay without jeopardizing the consumer's ability to pay for other necessities (food, shelter, other utility services, medical care, clothing, and transportation).

The key term in this definition is "able to pay." That is, affordability focuses on the ability of the consumer to pay its bill; not on the consumer's willingness to pay the bill. Ability to pay applies to lower-income households and is concerned with whether the household has enough income to pay its water bill without forcing serious tradeoffs in other essential goods and services. Willingness to pay can apply to any water customer and is concerned with whether the customer believes that there is sufficient benefit (or value) from the water service to justify the amount of the charge for service.

While affordability is based on the customer's ability to pay for water service, sustainability looks at the water utility's ability to meet its operating, maintenance, and capital needs through the rates that it charges. For four decades, AWWA has had a policy statement that encourages all water utilities to charge sustainable rates. Specifically, the Policy Statement on Financing and Rates (as last revised June 21, 1998, states, in part:

> AWWA believes the public can best be provided water service by self-sustained enterprises adequately financed with rates based on sound accounting, engineering, financial, and economic principles. … Water utilities should receive sufficient revenues from water service, user charges, and capital charges … to enable them to finance all operating and maintenance expenses and all capital costs.

One additional concern is the limited ability of some small water utilities to obtain the financing that is necessary to install capital facilities. That is, even if customers could afford to pay rates that would sustain the utility's operations, the utility also must be able to obtain up-front capital to install, maintain, and upgrade its facilities. The National Research Council has described this issue as follows:

> Adding to the financial difficulties of small non-metropolitan communities, lenders are less willing to loan to rural communities than to metropolitan ones because of the increased effort needed to monitor smaller loans relative to the profits they generate. … A shortage of loan capital is an especially significant problem for privately owned small water systems because they are not eligible to receive the government grants available to some publicly owned systems.[1]

The challenge, then, is to develop policies that enable each water utility to raise the capital that it needs to provide safe and reliable service and, at the same time, to charge rates that consumers can afford to pay and that recover the full cost of the utility's operations (including capital costs).

2. Why and How Does EPA Assess Affordability?

The 1996 amendments to the Safe Drinking Water Act (SDWA) require EPA to make national determinations about the affordability of drinking water regulations. EPA must determine if affordable technology exists for small water systems to comply with most maximum contaminant levels (MCLs). If EPA were to find that affordable "compliance technology" did not exist for a regulation, then the SDWA requires EPA to identify "variance technology" that is affordable but that might not result in full compliance with the MCL.

Specifically, EPA must make an affordability determination for each of three size categories of small systems (systems serving between 25 and 500 people, those serving between 501 and 3,300 people, and those serving between 3,301 and 10,000 people). In 1998, EPA made findings concerning affordable compliance technology for all regulations that existed as of 1996 (except for the few MCLs that existed before 1986). In addition, EPA must make affordability determinations for all MCLs proposed after 1996. To this point, EPA has found that affordable compliance technology exists for all regulations for all three size categories of small systems.

EPA has stated that the "objective of national-level affordability analysis is not to determine what is affordable to the poorest household in the U.S. Nor is it to determine what the richest household in the U.S. could afford. Rather, it is to look across all households in a given size category of systems and determine what is affordable to the typical, or 'middle of the road' household."[2] Using this underlying rationale, EPA has developed an affordability standard based on median household income.

EPA's affordability study concluded that the median-income household could afford to pay water bills ranging between 1.5% and 3.0% of the household's income. In 2000, the median household income in the United States was $42,148.[3] This would imply that the median household could afford to pay a water bill ranging from $630 to $1,260 per year. EPA compared water service to the costs of bottled water, telephone service, cable television service, and the use of point-of-entry and point-of-use devices for water treatment. From this comparison, EPA concluded that it was reasonable to use 2.5% of median household income (approximately $1,050 in 2000) as the threshold for affordable water service.[4]

By way of comparison, the Consumer Expenditure Survey conducted by the Bureau of Labor Statistics reports that an average household's expenditures on water, wastewater, and "other public services" (which my include solid waste, storm water, and others) totaled $296 in 2000.[5] This figure may be somewhat low because of households whose water costs are included in their rent; however, it also must be recognized that it includes wastewater and other local service (such as storm water and solid waste disposal in some communities). Moreover, the data for home owners only (that is, excluding all renters) shows total expenditures on this category of $396 in 2000. EPA's affordability threshold, then, would appear to be between three and four times the current level of household expenditures for water service.

3. Is EPA Reviewing its Affordability Approach?

On November 8, 2001, both houses of Congress adopted the Conference Report for H.R. 2620, the fiscal 2002 appropriations bill for various departments and independent agencies, including EPA. Included in the Conference Report is the following directive to the Administrator of EPA:

> The conferees direct the Administrator of EPA to begin immediately to review the Agency's affordability criteria and how small system variance and exemption programs should be implemented for arsenic. In addition, the Administrator should recommend procedures to grant an extension of time in meeting the compliance requirements for small communities when a community can show to the satisfaction of the Administrator that being in compliance by 2006 poses an undue economic hardship on that community.[6]

In that Conference Report, Congress also directed EPA to prepare a report, by March 1, 2002, "on its review of the affordability criteria and the administrative actions undertaken or planned to be undertaken by the Agency."

The Congressional action follows a similar recommendations made to EPA by the National Drinking Water Advisory Council (NDWAC) in August 2001. Specifically, in reviewing the cost of the proposed arsenic MCL, NDWAC expressed its concerns about EPA's affordability methodology and recommended that "NDWAC convene a working group to review EPA's methodology and assumptions for determining national affordability for regulations."[7]

EPA's Report to Congress, issued in March 2002 in compliance with the Conference Report, states that EPA "has initiated a review of its national level affordability critera."[8] EPA explains that its review will include consultation on economic issues with the Science Advisory Board (SAB) and the receipt of input from stakeholders on the following issues, among others:

- Alternatives to the use of median income
- Alternatives to 2.5% as the income percentage that is affordable
- Using separate affordability criteria for groundwater and surface water systems
- Impact of financial assistance, such as loans and grants, on affordability
- Making affordable technology determinations on a regional, rather than national, basis

On April 26, 2002, EPA published a Notice announcing a meeting of the SAB's Environmental Economics Advisory Committee to review issues related to affordability. The SAB committee is being asked to provide input to EPA on "economic issues associated with its national-level affordability criterion, as well as the methodology used to establish the criterion," including the specific issues mentioned in the Report to Congress.[9] The Notice also indicates that EPA subsequently will obtain input from both NDWAC and stakeholders on affordability issues.

4. What are the Key Issues in Determining Affordability?

There are at least four important issues that affect EPA's determination of affordability.

1. Measuring economic risk from the median household. A meaningful analysis of affordability should evaluate utility consumers who are economically at risk; that is, those consumers who might have difficulty paying higher water bills. A household with median income, now in excess of $42,000 per year, is unlikely to be in that category on a regular basis. The federal government routinely defines households that are economically at risk, and it provides those households with special benefits, through the federal poverty level guidelines. The federal poverty level is based on the number of people in the household and an estimate of the expenditures that are needed to ensure the health of those people. Importantly, there is only a weak correlation between median income and the percentage of households in poverty in a community, making median income inappropriate for use as a proxy for poverty.[10]

2. Selecting 2.5% of median income as an affordable level for water costs. EPA's selection of 2.5% of median income as being an affordable level for water costs for a community fails to consider several important factors. For instance, the Consumer Expenditure Survey (CES) shows that the cost of water and other public services has remained between 0.7% and 0.9% of median income for several decades. EPA has selected one element of that cost – drinking water – and assumed that it could rise to three times the historic level for water, wastewater, and other services in this category without otherwise affecting the household. In addition, EPA fails to recognize that expenditure patterns are different between low-income households and median-income households. For example, the CES shows that while the average household spends less than 6% of its income for all utility services, low-income households (the 20th percentile) spend 21% of their income for utility servies.[11]

3. Comparing water expenditures to other goods and services. In selecting 2.5% of median income, EPA reasoned that a household should be expected to spend at least as much for water as it does for cable television or telephone serve. EPA neglected to consider two salient facts: (a) many low-income households cannot afford these services and (2) each year the federal and state governments spend billions to dollars of subsidize the provisions of telephone service for low-income households. In fact, the Federal Communications Commission (FCC) documents that 30% of households that have access to cable television do not subscribe to the service.[12] Similarly, FCC data and various other studies show that many low-income households cannot afford telephone service on a regular basis.[13]

4. Evaluating and understanding tradeoffs made by low-income households. There is a growing body of evidence documenting the tradeoffs that low-income households must made every day. When utility costs increase, the household will decrease expenditures on other necessities, such as heating, cooling, medical care, and food. EPA has failed to acknowledge these tradeoffs and the public-health consequences that can result from these tradeoffs (which may more than offset the public-health benefits of a proposed MCL for drinking water).[14]

EPA's Report to Congress specifically discusses the first two issues, but does not mention the last two. One would hope that EPA would consider all of these issues in re-evaluating its methodology for making affordability determinations.

5. Is Sustainability Included in EPA's Analysis?

EPA's analysis of affordability does not include an explicit recognition of the tension between affordability (the desire to keep rates low) and sustainability (the need to have rates recover the full cost of providing service). An EPA publication on utility rate-setting practices, however, clearly discusses this tension between affordability and sustainability, stating:

> Economic theory argues strongly for cost-based utility rates, that is, rates based on the true cost of providing a service. An efficient (cost-based) rate should sustain the water system; however, if the rate is unaffordable to the service population and customers cease to pay for and/or receive the service, the water system itself may cease to exist. The solution may achieve a degree of economic efficiency, while sacrificing other fundamental public health, safety, and quality-of-life purposes.[15]

Moreover, while EPA acknowledges the need for a water utility to finance any capital improvements, it simply assumes in its affordability studies – without conducting any analysis – that "affordability to the median household served by [the utility] can serve as an adequate proxy for the affordability of technologies to the system itself."[16]

This contrasts with the discussion of this issue by the National Research Council quoted in section 1, above. There, the expert panel convened by the National Academy of Sciences recognized that small water utilities, particularly those in non-metropolitan areas, may have difficulty finding a lender who sufficiently understands the risks, cash flows, and rate-setting procedures of a small water utility. This can be particular concern for the financing of a long-lived asset, such as a treatment plant, where the lender might only be willing to provide commercial financing for a much shorter period (say five or ten years) than the life of the asset (often expected to be 20 to 25 years for a treatment plant). This can result in a serious disconnect between the cost of supporting the asset and the customers who will benefit from the asset.

In effect, then, financing concerns can lead to rates being higher than the sustainable level in the early years of the asset – potentially creating an affordability concern – and being lower than the sustainable level in the later years of the asset (when the debt has been repaid), creating concerns with the future ability of the system to finance capital improvements. EPA's affordability determinations, however, simply assume that the water utility will be able to finance any needed capital improvements.

EPA's list of affordability issues that it is reviewing includes the effect on affordability of below-market loans and grants. While such forms of financing may have a favorable impact on the affordability of water service, they also can move a utility further from the goal of charging rates that are self-sustaining. This is particularly the case for operations and maintenance grants that subsidize a portion of the utility's day-to-day operating costs.

In summary, in making determinations about affordability, EPA should be cognizant of the effect of its decisions on the ability of water utilities to charge rates that are self-sustaining. There is no indication in its affordability deliberations that EPA has recognized the link between the two important goals of affordability and sustainability.

6. Are Small and Large Water Utilities Different?

Affordability and sustainability concerns are not limited to small water systems. There is little difference in the levels of median income and poverty between small water utilities and larger utilities ("larger" being those that serve more than 10,000 people).[17] In addition, large water utilities that serve urban areas are likely to have pockets of poverty that are at least as severe as those present in many smaller water utilities. It is not surprising, therefore, that an early study of water affordability concluded that large water utilities had affordability concerns at least as great as those faced by smaller water utilities.[18]

There is, however, an important difference between small and large water utilities' abilities to address affordability concerns. Larger utilities are much more likely to have only a portion of their customer base facing affordability problems. In such a utility, it may be possible (subject to legal, policy, and political constraints) to mitigate affordability concerns through rate changes, such as lifeline rates or discounts for low-income customers. In contract, small utilities that face an affordability problem are likely to have most of their customers in similar economic circumstances. It is unlikely, therefore, that a small utility will be able to resolve its affordability problems through discounts or other local actions. An EPA study recognizes this important difference, stating: "While larger systems can spread the cost of providing assistance to low-income customers, a small system with an impoverished customer base has no opportunities for even limited subsidization."[19]

Sustainability concerns also are not solely the province of small water utilities. Several communities, both large and small, are served by water utilities that do not charge rates for water service that are self-sustaining. This appears to be a particular problem with some government-owned utilities that may find it to be politically unpopular to increase water rates on a regular basis. Moreover, some government-owned utilities rely on federal or state grants to finance major capital improvements. This results in user charges that do not reflect the cost of replacing or obtaining capital, making it difficult for the utility to replace or upgrade its capital facilities in a timely manner.

There has been a major focus in recent years on the problems facing small water utilities that are under-capitalized, do not change their rates regularly, or otherwise lack the financial and managerial capabilities to operate on a self-sustaining basis. Similar concerns exist, however, with large water utilities that likewise have not invested sufficient capital to maintain their facilities. Indeed, this history of under-investment by some large water utilities may be one of the major factors behind the recent initiative by AWWA and others to seek to increase the level of federal funding for water utility projects.

Thus, while the SDWA focuses on affordability and sustainability (termed "capacity development" in the SDWA) for small water utilities, it should be recognized that affordability and sustainability are also important concerns for larger utilities.

7. Are Metropolitan and Non-Metropolitan Utilities Different?

There are numerous demographic differences between water utilities located in metropolitan areas (MAs) when compared to utilities located in non-metropolitan areas (non-MAs). These differences were explored in detail in a recent stuffy prepared for the National Rural Water Association.[20] Following are some highlights from that study.

Fewer than 30% of the counties in the United States are located in MAs, but approximately 80% of the people live in MAs. MAs and non-MAs each have the same number of small water systems (each area has approximately 26,600 systems serving fewer than 3,300 people). This means, of course, that the average MA county has approximately three times as many water systems in it as the average non-MA county.

There is a dramatic difference in income levels and the incidence of poverty between MAs and non-MAs. Median household income is approximately 35% higher in MAs than in non-MAs. Similarly, poverty rates in non-MAs are about 50% higher than the poverty rate in MAs.

These differences are even more dramatic when they are examined by the size of the water system. For example, the average water system serving fewer than 500 customers in an MA had a median household income of more than $31,000 in 1990. In contrast, the average water system of that size in a non-MA had a median household income of only $23,000 in 1990. Similarly, water systems of that size in MAs had, on average, 11% of their customers living in poverty. Non-MA systems of that size had more than 17% of their customers in poverty.

Using either income levels of poverty rates, there is a dramatic (and statistically significant) difference between small water systems in MAs and those in non-MAs. The differences are so large and so important that they should be part of EPA's national affordability methodology. For example, the NRWA study includes an analysis of the 400 lowest-income, highest-poverty counties. Those counties contain a total of 3,670 small water systems (those serving fewer than 10,000 people). However, 3,556 of those small systems are in non-MAs; only 114 of these systems are in MAs.

Another look at these data highlight the dramatic nature of the differences between water systems in MAs and those in non-MAs. Approximately one out of every eight small systems in non-MAs is located in an economically distressed county. In contrast, only one out of every 250 small systems in MAs is located in a distressed county.

These differences between metropolitan and non-metropolitan areas should play an important role in establishing national policy on affordability and sustainability. National averages and medians tend to give extraordinary weight to metropolitan areas because of the concentration of population in those areas. But one-half of the small water systems in the country are not located in those metropolitan areas, and those non-metropolitan small systems face economic and demographic conditions that are very different from those present in metropolitan areas.

8. Regulatory and Legislative Implications

Serious regulatory and legislative implications arise from affordability and sustainability concerns, particularly for small water systems. Among the major implications are the following.

1. Dual standards. If EPA finds that there is no affordable "compliance technology" for small systems, then systems can receive a permanent variance from the MCL if they install "variance technology." In designating variance technology, EPA must ensure that the use of the technology would protect public health. The effect of the SDWA's structure, then, is to permit the use of dual standards for certain contaminants: the MCL (that larger systems must meet) and the "affordable yet protective" level that small systems would meet with variance technology. Of course, EPA has never found an MCL to be unaffordable for a category of small systems, so a dual standard has not yet been implemented. The effect of the statutory provisions, though, is to permit the use of dual standards if EPA finds compliance to be unaffordable.

2. Delayed implementation. If a small water system (one serving fewer than 3, 300 people) can show that it will have difficulty financing capital additions needed to comply with an MCL, and if it can show that there will not be an "unreasonable risk to health," then the system can obtain exemptions from complying with the MCL for up to nine years. EPA's draft of guidance for arsenic provides an interesting illustration of the exemption provisions. The MCL was issued in January 2001. The SDWA provides for a five-year implementation period, so the MCL becomes enforceable in 2006. However, if a system serving fewer than 3,300 people can show that it is having trouble financing and installing compliance technology, and if it has less than 20 ppb of arsenic (twice the MCL) in its water, then it can delay compliance until as late as January 2015.[21]

3. Prioritization of funding. Establishing an MCL at a level that is at or near the "unaffordable" level will place pressure on state loan funds, and other sources of funding for water utilities, to provide substantial amounts of funding for that particular compliance issue. This could lessen the amount of funding available for other necessary improvements, such as main replacements, facility upgrades, information technology, and others. The arsenic rule, again, provides a telling example. On April 29, 2002, EPA and the Rural Utilities Service (RUS) entered into a Memorandum of Agreement (MOA). In the MOA, RUS agrees to "assign funding priority to projects needed for compliance with the arsenic" MCL. EPA will "strongly encourage" state financing agencies to do the same. In addition, EPA and RUS will make arsenic compliance a "priority use of technical assistance resources."[22]

4. Consolidation initiatives. In order for a utility to receive an exemption, it must show that is cannot take reasonable actions to obtain funding or otherwise achieve compliance with the MCL, including consolidation with another water system or a change in ownership. As compliance costs begin to exceed the level that is affordable, sustainable, and able to be financed, it is likely to result in increased emphasis on consolidation or ownership changes by small systems. While there are undoubted benefits to consolidation in many circumstances, some consolidation and ownership changes could have long-term unintended impacts on the utility and its customers. For example, changing from public to private ownership would make a utility ineligible for grant funding and some low-interest loans, potentially exacerbating affordability concerns. Similarly, physical consolidation can result in a utility being of a large enough size that it would no longer be eligible for certain exemptions or variances.

9. What are AWWA's Regulatory and Legislative Options?

There are numerous ways that the SDWA and EPA's implementation of the Act's affordability provisions could be modified. It is doubtful that there is some "perfect" solution; rather, most options involve some type of trade-off among important goals like affordability, sustainability, and nationwide uniformity. The following options are presented for discussion purposed only; neither the author nor AWWA necessarily endorses any of these options. In each instance, potential positive and negative impacts are listed; it should be emphasized that these impacts are not certain to result from these options, but also are provided for discussion purposes.

1. Provide targeted funding to small utilities with affordability concerns. This would involve, for example, a special appropriation, separate from and in addition to existing SRF and RUS funding, to provide grants or no-interest loans to small utilities with demonstrated economic need (based on a combination of water and wastewater charges, income, and poverty levels). Positive impacts: affordability, small system financing. Negative impacts: sustainability.

2. Change the threshold at which small systems are regulated under SDWA. The SDWA applies to community water systems that serve at least 25 people. According to EPA's Safe Drinking Water Information System as of July 2001, there were approximately 61,500 public water systems in the United States. Of these, approximately 10,200 (17%) served fewer than 50 people. An additional 10,000 (17%) served between 50 and 100 people. Exempting these very small water systems from regulation would put them on the same regulatory footing as private wells and shared wells, where the owner is responsible for the safety of the water but without federal regulation. Positive impacts: affordability, regulatory resources. Negative impacts: dual standards, public health.

3. Abolish the potential for a dual standard. This option would eliminate the affordability-based variances for small systems. This could be coupled with either increased levels of funding or a mechanism for the government (or another responsible party) to assume the operations of non-complying water system. Positive impacts: dual standards, public health. Negative impacts: affordability, regulatory resources, sustainability. Potential unintended consequence: Would this encourage very small systems to go out of business or break into smaller systems to become unregulated, resulting in a de facto dual standard anyway?

4. Implement a federal funding program for low-income water customers. A federal water assistance program (that also might include wastewater and storm water costs) could be similar to other federal utility-assistance programs. These include the Low Income Home Energy Assistance Program (LIHEAP) for energy costs (electricity, natural gas, and fuel oil) and the Lifeline program for telephone service. LIHEAP is funded through general tax revenues and is administered by state human services agencies. Lifeline is funded through a federal tax surcharge on every telephone bill and is administered by local telephone companies with state and federal oversight. Both programs provide funding based on a household's income or poverty status. Positive impacts: affordability, sustainability. Negative impacts: small system financing. Potential unintended consequences: Would a large portion of the funding go low-income households served by very large water systems, discouraging those systems from using local rate mechanisms (such as discounts or lifeline rates) to address affordability and diverting funding from low-income households in small, rural systems that do not have local rate options?

Notes

[1] National Research Council, *Safe Water from Every Tap: Improving Water Service to Small Communities* (National Academy Press, Washington, DC. 1997), p. 25.

[2] US EPA, National Primary Drinking Water Regulations: *Arsenic, Federal Register* (Jan. 22, 2001), pp. 7042-7043.

[3] US Census Bureau, *Money Income in the United States: 2000* (US GPO, Washington, DC. 2001.), Table A.

[4] US EPA, *Variance Technology Findings for Contaminants Regulated Before 1996*, EPA 815-R-98-003 (1998), p. 45.

[5] US Bureau of Labor Statistics, Consumer Expenditure Survey Home Page <http://www.bls.gov/cex/home.htm>, customized data extraction.

[6] Conference Report No. 107-272, p. 175.

[7] NDWAC, *Report of the Arsenic Cost Working Group to the National Drinking Water Advisory Council* (August 2001), p. 34.

[8] US EPA, *Report to Congress: Small Systems Arsenic Implementation Issues*, EPA 815-R-02-003 (March 2002).

[9] US EPA, Notice: Science Advisory Board, *Federal Register* (April 26, 2002), pp. 20765-20767.

[10] See, for example, Raymond J. Supalla and Saeed Ahman, *Defining the Financial Capacity of Rural Communities to Meet Sewer and Water Needs* (Department of Agricultural Economics, University of Nebraska-Lincoln. 1997); Scott J. Rubin, *Criteria to Assess the Affordability of Water Service* (National Rural Water Association. 2002).

[11] US Bureau of Labor Statistics, *Consumer Expenditures in 2000*, Report No. 958, April 2002.

[12] Federal Communications Commission, *Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming: Seventh Annual Report*, Report No. FCC-01-1 (Jan. 2001).

[13] Kathryn Edin and Laura Lein, *Making Ends Meet: How Single Mothers Survive Welfare and Low-Wage Work* (Russell Sage Foundation. 1997).

[14] See, for example, Kurt Bauman, *Direct Measures of Poverty as Indicators of Economic Need: Evidence from the Survey of Income and Program Participation*, U.S. Census Bureau Population Division Technical Working Paper No. 30 (Nov. 1998); Kurt Bauman, *Extended Measures of Well-Being: Meeting Basic Needs*, U.S. Census Bureau Current Population Reports, P70-67 (June 1999); Joyce M. Mercier, *et al., Iowa's Cold Winters: LIHEAP Recipient Perspective* (Iowa Department of Human Rights. 2000); U.S. Department of Agriculture, *Household Food Security in the United States in 1995: Summary of Report of the Food Security Measurement Project* (1997).

[15] US EPA, *Consolidated Water Rates: Issues and Practices in Single-Tariff Pricing*, EPA 816-R-99-009 (Sept. 1999), p. 35.

[16] US EPA, *Variance Technology Findings for Contaminants Regulated Before 1996*, p. 38.

[17] Scott J. Rubin, *Criteria to Assess the Affordability of Water Service* (National Rural Water Association. 2002).

[18] Scott J. Rubin, Are Water Rates Becoming Unaffordable?, *Journal AWWA* (Feb. 1994), 86:2:79-86.

[19] US EPA, *Consolidated Water Rates: Issues and Practices in Single-Tariff Pricing*, p.36

[20] Scott J. Rubin, *Criteria to Assess the Affordability of Water Service* (National Rural Water Association. 2002).

[21] US EPA, *Draft Arsenic Guidance* (March 2002), Appendix H (Exemptions).

[22] Memorandum of Agreement between the United States Environmental Protection Agency and the Rural Utilities Service of the United States Department of Agriculture: Assisting Small Community Water Systems in Complying with the Public Health Standard for Arsenic in Drinking Water (Apr. 29, 2002).

Appendix D: Selected Statistics – Washington Water Systems

Table 1. Number of People Served by Transient Non-Community Water Systems Categorized By Population Served and Ownership

Ownership Category	<100	Pop. Served	% of total pop.	101-1000	Pop. Served	% of total pop.	>1000	Pop. Served	% of total pop.	Total # Systems	Total Pop. Served	% of total pop.
Publicly Owned	182	8,850	0.1	187	73,501	1.2	93	218,987	3.4	462	301,338	4.7
Privately Owned	761	34,480	0.5	350	89,395	1.4	16	39,510	0.6	1,127	163,385	2.6
Totals	1,043	43,330	0.7	537	162,896	2.6	109	258,497	4.1	1,589	464,723	7.3

Table 2. Number of People Served by Non-Transient Non-Community Water Systems Categorized by Population Served and Ownership

Ownership Category	<100	Pop. Served	% of total pop.	101-1000	Total Served	% of total pop.	>1000	Pop. Served	% of total pop	Total # Systems	Total Pop. Served	% of total pop
Publicly Owned	41	2,250	0.04	76	34,047	0.5	14	241,061	3.8	131	277,358	4.4
Privately Owned	97	5,331	0.1	73	21,958	0.3	6	14,464	0.2	176	41,753	0.7
Totals	138	7,581	0.1	149	56,005	0.9	20	255,525	4.0	307	319,111	5.0

Table 3. Number of People Served by Community Water Systems Categorized by Number of Connections and Ownership

Ownership Category	15-100	Pop. Served	% of total pop	101-1000	Pop. Served	% of total pop	>1000	Pop. Served	% of total pop	Total # Systems	Total Pop. Served	% of total pop
Publicly Owned	125	22,844	0.4	247	287,231	4.5	156	4,163,911	65	528	4,473,986	70
Privately Owned	1,419	155,137	2.4	290	212,746	3.3	45	607,675	10	1,754	975,558	15
Totals	1,544	177,981	2.8	537	499,977	7.8	201	4,771,586	75	2,282	5,449,544	85

Table 4. Number of People Served by Group B systems Categorized by Ownership

Ownership Category	Number of Systems	Pop. served	% of total pop
Public	594	6,851	0.1
Private	12,106	135,500	2.1
Totals	12,700	142,351	2.2

Table 5. Current Number of Group A Water Systems with Red Operating Permits by Number of Connections

<100 connections	100-1000 connections	>1000
287	23	2

Notes and Observations:

- Percent calculations are based on the total population served by Group A and B water systems of 6,400,000. It does not include the population served by individual wells.
- The total number of regulated water systems is approximately 16, 878.
- 75 percent of the population is served by 1 percent of the systems with more than 1,000 connections.
- The Group B systems represent 75 percent of the systems but serve only 2 percent of the population.
- 92 percent of the Red Operating Permits (representing the most significant compliance problems in Group A systems) have been issued to systems with less than 100 connections.

Appendix E: Affordability and Sustainability Workplan
March 18, 2003

Purpose

The WSAC Subcommittee has been established to assist the DOH in assessing the current status of water system affordability and sustainability issues in the state by:

- Identifying major DOH accomplishments to date in dealing with these issues.
- Identifying and evaluating remaining issues.
- Making recommendations for future DOH actions based on guiding principles to be established by the subcommittee.

Approach

DOH staff review existing literature to identify previously made recommendations, guiding principles, and existing issues:

- WSAC
- AWWA
- EPA
- DW

Conduct 3 Subcommittee meetings

- Meeting 1 – Review existing issues, guiding principles, and recommendations.
  - Begin to formulate recommendations.
- Meeting 2 – Identify final approach recommendations – concerns.
  - Categories – Guidelines, Policies, Regulations, Legislation.
- Meeting 3 – Refine recommendations (implementation).
  - Funding and work assignments.

Write report

- WSAC Approval
- DW Implementation

Schedule

Full WSAC
Workplan Briefing – January 7, 2003
Status Report – April 10, 2003
Report Recommendations – July 10, 2003
Final Report – October 14, 2003

Subcommittee
Meeting 1 – March 18
Meeting 2 – May 13
Meeting 3 – June 17

Appendix F: Existing Document Review

Document

Washington's DW Program: Recommendations Regarding Scope and Funding, WSAC, July 2000

Purpose

The WSAC report dated July 2000 provides recommendations to DOH focused on the scope and funding of state and local DW programs.

Guiding Principles

The recommendations contained in the report were based on an extensive set of principles developed by WSAC. The Guiding Principles are described in pages 14 through 21 of the report and cover the following 11 major categories:

1. Public Health Protection
2. Functions of the DOH and LHJ
3. Governance and Delegation
4. Data Management / Sharing
5. Program Funding
6. Water System Funding
7. Technical Investigations
8. Compliance
9. Planning
10. Public Education and Training
11. Training and Smaller Water Systems

Among the Guiding Principles, those contained in the Water System Funding Category are most related to affordability and sustainability issues. These principles include:

> State funding programs should provide assistance in a manner consistent with DOH objectives for achieving long-term financially responsible and well-managed systems (viability), preventing the proliferation of new nonviable systems, and financing restructuring activities by satellite managers and others.
>
> The provision of financial assistance should be linked to efforts to have systems operate in compliance with relevant regulatory requirements, recognizing that such financial assistance will focus on public health, but may not be adequate to meet all SDWA requirements.

Recommendations

The report contains several recommendations related to management and funding of the State DW Program. Of particular relevance to the issue of building water system capacity are the following recommendations included in the report:

- All new water systems, as currently defined in state law, should continue to undergo a regulatory review process to ensure proper siting, construction, and installation of a safe and reliable drinking water supply.
- The State DOH should pursue enhancing the requirements for establishing new public water systems, to ensure they are properly operated and maintained into the future. This includes heightening the emphasis that proposals for new water supplies be directed first toward existing, well-operated water systems. If a new system is indeed necessary, clear steps must be taken to formally document ownership and operating responsibilities with a competent and qualified water system operator.
- Recognize and understand the special needs of small systems in developing and implementing all DW functions.
- Expand current level of DOH and third-party communication, education, training, technical assistance, and information sharing efforts.
- Establish a technology transfer program to connect water system expertise and mentoring with system owners and operators who need it.
- Dedicate the full 2 percent SRF set-aside funds available to small system initiatives.
- Enhance existing and develop new programs that assist small system operators, managers, and decision-makers in developing system technical, managerial, and financial capacity.
- Transition the existing DOH Small Water System Advisory Committee into a new subcommittee of the full WSAC.

Status of Implementation, Current Issues, and Possible Follow-up Actions

Please refer to the analysis of the Small Water Systems: Problems and Proposed Solutions – A Report to the Legislature – January 1991 for a description of these items.

Document

SMA Brainstorming Committee Final Report on Barriers to SMA Operations

Purpose

DOH staff under the direction of the SMA Brainstorming Committee prepared the report. The report identifies barriers SMA's have experienced in administering their programs and provides suggested solutions. The report was transmitted to the WSAC in July 1999.

Guiding Principles

Guiding principles were not specifically identified for this project.

Recommendations

The report identified 30 barriers and included DOH proposed action for addressing each barrier. In addition the report contained the following 7 recommendations for follow-up actions:

1. Continue/improve coordination/partnership between DOH and SMAs (all aspects of program including education, compliance, and enforcement efforts).
2. Continue efforts on addressing 30 barriers as proposed in the response document and provide periodic status reports to SMA Committee.
3. Conduct joint post legislative session workshop with Ecology to educate SMAs about changes to water resource law and Ecology business practices from recent court decisions.
4. Develop legislation to enable DOH to mandate failing systems, as determined by rules adopted by DOH, to receive SMA management and operation service. (**Note**: DOH places conditions on new systems created after July 23, 1995 that are not owned or managed and operated by SMAs that enable DOH to direct those systems to an SMA for management and operation if that system violates the department's operating requirements).
5. Develop legislation to streamline receivership process.
6. Develop legislation to revise OP fee schedule to implement a non-compliance surcharge for red OP (thereby provide economic incentive to remain in compliance). Surcharge revenue could be revenue neutral to DOH or funds could be placed in a dedicated account for additional compliance efforts.
7. Amend rules (WAC) to expand scope and authority of DOH's periodic review/evaluation of SMAs and streamline approval modification/revocation process.

Status of Implementation

The recommendations related to legislative and regulatory changes were further discussed and evaluated with WSAC members in meetings held subsequent to the report preparation. Based on a number of factors, including the potential impact on other legislative initiatives at the time, the legislative and regulatory changes listed in recommendations 4, 5, 6, and 7 were not pursued.

DOH has continued with other efforts to overcome the barriers to SMA operation that were identified in the report, but has not provided periodic status reports to the SMA Committee.

Current Issues

Please refer to the analysis of the SMA Program for a description of these items.

Possible Follow-up Actions

Please refer to the analysis of the SMA Program for a description of these items.

Document

AWWA CAP Training Presentation

Purpose

A training document for AWWA volunteers to help small systems develop the capacity to sustain themselves.

Guiding Principles

Although not specifically identified as guiding principles, the training material does contain the following definitions and directions, which serve as the basis for the training:

1. A water system has the capacity to sustain itself if the managers and operators are aware of the present and future technical demands on facilities and operations, along with all of the managerial obligations of the system, and those needs can be met and paid for with revenues from user charges.
2. The CAP is not a regulatory compliance assistance program, but rather a best practice approach to ensuring sustainability and goes beyond the requirements of many states.
3. Basket cases are state responsibility, not AWWA CAP role. The CAP is designed to assist systems in "gray" area.

Recommendations

This is a training document that focuses on how to work with small systems and develop recommendations for action the system should take to ensure sustainability. The training does not contain recommendations for state action.

Status of Implementation

Discussions with AWWA member(s) involved with developing and providing the training indicate that there is currently minimal activity in Washington due to lack of incentive for small systems to participate.

Current Issues

N/A

Possible Follow-Up Actions

Consider state role in creating an incentive for participation in the program:

- Requiring system to request CAP as part of a compliance agreement.
- Give higher funding priority for systems who have participated.
- Provide AWWA with funding to assist in conducting assessments.
- Use of third party contracts.

Document

Information For States on Developing Affordability Criteria for Drinking Water, EPA, February 1998

Purpose

This guidance prepared by EPA for assisting states in developing their own affordability criteria for use in implementing the DW SRF Program and issuing variances and exemptions.

Guiding Principles

Guiding principles were not specifically identified in this guidance.

Recommendations

The guidance discusses affordability issues and processes for determining affordability. It does not contain recommendations for specific actions.

Status of Implementation

DOH has developed the Financial Viability Manual, which includes an affordability benchmark of 1 ½ percent of median household income. EPA is currently using a benchmark of 2 ½ percent of the national median household income for determining affordability of treatment technologies. A draft SAB report on EPA's criteria recommends that EPA consider a lower percentage.

Current Issues

N/A

Possible Follow-up Actions

N/A

Document

Handbook for Capacity Development, EPA, 1999

Purpose

This document is a handbook designed to assist states in developing programs required by the 1996 amendments to ensure that:

- New water systems have the technical, financial, and managerial capacity to meet drinking water regulations.
- Existing water systems acquire and maintain such capacity.

Guiding Principles

The document does not specifically identify guiding principles.

Recommendations

This document provides guidance to states on how to develop their capacity programs and recommendations for legal and regulatory authorities, which can be used.

Status of Implementation

DOH has met the EPA requirements and the capacity program has been approved. Accordingly, Washington receives the full SRF allotment allowed under the SDWA. As a matter of note, the DOH program is cited in the EPA handbook as an excellent example of a state capacity program.

Current Issues

N/A

Possible Follow-Up Actions

Evaluate legal and programmatic tools used in other states for possible use in Washington.

Title of Document

Small Water System Program – 5 Year Action Plan – April 1990
Small Water System Task Force Solutions – April 1990
Small Water Systems: Problems & Proposed Solutions – A Report to the Legislature – Jan 1991

Purpose

In the late 1980s and early 1990's DW prepared several documents including those listed to describe the small system problems in Washington and recommended actions for helping resolve those problems. Two key factors lead to the development of these documents:

- A growing number of small water systems in the state and the problems associated with them.
- The increased regulatory requirements resulting from the 1986 amendments to the SDWA.

The terminology used to summarize the problems associated with small systems has evolved from "viable" and "non- viable" to "capacity" and more recently to affordability and sustainability. However, the essence of the issue remains that many systems do not have the financial, managerial, or technical capacity to provide a reliable source of safe water and meet all regulatory requirements.

Guiding Principles

Although not specifically identified as guiding principles, the documents focused on actions that could be taken to assure that:

- Existing water systems are designed, managed, and operated in a manner to provide safe and reliable drinking water now and in the future.
- No new water systems would be allowed to be developed unless they could meet established criteria to demonstrate their sustainability (viability was the term in use at the time).

Recommendations

The documents describe a number of actions DW planned to take to help resolve the problems associated with small systems. The report to the Legislature contains an extensive list of recommendations, which incorporate relevant actions from the DW action plans. The full list of recommendations to the legislature is attached to this paper.

To assist in the subcommittee review, a brief status of actions taken on the 1991 Legislative Report recommendations that most directly relate to water system affordability and sustainability follows. The recommendations listed are condensed and consolidated from the 1991 Legislative Report document, rather than quoted verbatim.

Recommendation 1

Criteria to assess water system financial viability should be developed, used as a measure for compliance, and to prevent the establishment of new non-viable water systems.

Current Status

Several revisions were made to the DW statute and regulations:

- WAC 246-290 was amended to include a demonstration of financial viability as part of the utility's water system plan and small water system management program.
- RCW 70.119(a) was amended to include financial viability requirements as part of its SMP.
- RCW 43.70.195 was amended to include financial viability requirements as an element in assessing and taking receivership actions against failing water systems.

Remaining Issues

- Application of the tools / programs listed above have been inconsistent due to a lack of staff resources to oversee and provide the level of support necessary for maintaining credible programs.

Possible Follow-up Actions

- Please refer to the analysis of the Financial Viability, WSP, SWSMP, Receivership, and SMA Programs for a description of these items.

Recommendation 2

A statewide SMP and implementation of the Public Water System Coordination Act should be promoted and used to prevent new non-viable systems from forming and help deal with failing systems. Additional specific recommendations in the report related to SMA's include:

- SMA should meet certain criteria and DW should approve and maintain a list of qualified SMAs.
- All counties should identify SMAs.
- The SMA program should help provide potential receivers for failing systems.
- Funding alternatives for small system improvements for SMAs should be identified.
- Properly qualified SMAs should receive priority consideration for capital improvement funding.
- All requests for public water service should be directed to qualified SMA's before a new water system is established.

Current Status

Subsequent to the 1991 Legislative Report, RCW 70.119A.030(2) and RCW 70.116 were amended, and WAC 246-295 was created concerning Satellite Management. These requirements relate to the establishment, approval, and operation of Satellite Management agencies (see existing SMA Program Analysis). These requirements addressed many of the recommendations listed above. Additionally, the establishment of the DWSRF Program has provided some alternatives for small system funding and includes priority consideration for capital funding for SMA's.

Remaining Issues

- Please refer to the analysis of the SMA and SMA Brainstorming Committee Final Report on Barriers to SMA Operations for a description of these items.

Possible Follow-Up Actions

- Please refer to the analysis of the SMA Program for a description of these items.

Recommendation 3

Several recommendations were made to investigate various options for funding capital improvements.

Current Status

The development of the SRF Program has addressed some of the recommendations for funding.

Remaining Issues

- Please refer to the analysis of the SRF Program for a description of these items.

Possible Follow-Up Actions

- Please refer to the analysis of the SRF Program for a description of these items.

Recommendation 4

The 1991 Legislative Report contains several recommendations related to using real estate transactions to bring attention to put pressure on failing water systems to resolve their problems.

Current Status

The compliance strategy identified in the DW's Operating Permit Program (color categories) is being used by local governments to various degrees when issuing subdivisions approvals and building permits in determining system adequacy. To a lesser degree lending institutions have used the DW's Operating Permit Program when issuing home loans in determining system adequacy.

Remaining Issues

- Please refer to the analysis of the OP Program for a description of these items.
- Specific information concerning water system status / compliance is not being recorded on property titles as part of the public disclosure process to potential purchasers of property.

Possible Follow-Up Actions

- Please refer to the analysis of the OP Program for a description of these items.
- Identify Drinking Water public disclosure requirements and put into law.

Recommendation 5

The 1991 Legislative Report contains several recommendations related to strengthening water systems receivership as a tool in resolving water system financial viability issues.

Current Status

Subsequent to the 1991 Legislative Report, RCW 43.70.195 was amended to more clearly articulate receivership requirements. The key provision was the requirement that if no other person is willing to be named receiver, the court will appoint the county.

Remaining Issues

- Please refer to the analysis of the Receivership Program for a description of these items.

Possible Follow-Up Actions

- Please refer to the analysis of the Receivership Program for a description of these items.

Recommendation 6

Several 1991 Legislative Report recommendations were made concerning strengthening UTC requirements related to water system oversight and improved coordination with the DW.

Current Status

Several revisions were made to the DW statute and regulations:

- RCW 80.04.110 was amended to allow the DOH to trigger UTC review of any non-municipal water system regardless of size or type of ownership.
- DW and UTC developed a MOU concerning water system oversight responsibilities related to financial viability and customers complaints.

Remaining Issues

- RCW 80.04.110 has not been fully utilized because of staff recourse limitations and the opinion by some agency staff that it is not an effective tool.
- The MOU is outdated and needs to be amended.
- There is currently no UTC financial oversight of small privately owned water systems (<100 connections).

Possible Follow-Up Actions

- Develop a coordinated effort between UTC and DOH in improving the financial viability oversight of private water systems (update MOU, statute changes, etc.).

Appendix G: Existing Program Review

Title of Program

WSP

Supporting Documents

WSP Handbook

Basis of Authority

43.20 RCW
246-290 WAC

Purpose

WSP's are comprehensive planning documents where a system is required to identify and propose actions to address its needs to achieve and maintain compliance with relevant, local, state, and federal laws. The WSP includes a six-year budge, funding sources for making proposed improvements, and an assessment of water rates and proposed rate structure.

Status of Implementation

Currently water systems are required to submit a WSP to the DOH for approval. As of February 2003, 62 percent of the water systems are in compliance with the planning requirements. Those systems that serve more than 1,000 connections 75 percent are in compliance.

Current Issues

1. State resources to review and approve WSP's are limited. The current approach is set up on a public health risk priority system.
2. Political reality sometimes results in proposed rates identified in WSP not being approved by utility elected officials.

Possible Follow-Up Actions

1. Additional state resources allocated to affordability and sustainability technical assistance and plan reviews.
2. Additional state involvement in utility rate setting (i.e. guidance documents, laws / regulations).
3. Amend regulations to require water system plan approval by the elected officials of the system.

Title of Program

SWSMP

Supporting Documents

SWSMP Guide

Basis of Authority

43.20 RCW
246-290 WAC

Purpose

A program to assist utility owners / operators of small non-expanding community Group A water systems to meet 18 elements of State and Federal drinking water laws. When all 18 elements are analyzed the system should be in a good position to determine their affordability and sustainability. Element 17 includes a six-year operating budget.

Status of Implementation

Currently because non-expanding small water systems are only required to develop a SWSMP and have it on file it is difficult to determine how many systems have completed the program. After surveying DW planning staff, the estimate of systems completing the SWSMP is very low. When requested by staff as a prerequisite to receiving a SRF loan, the system has submitted a SWSMP for approval.

Current Issues

1. Even though the SWSMP is a basic analysis / planning tool, small water systems are having difficulty completing the program. Lack of complete records and full-time knowledgeable utility staff are two reasons the SWSMP's are not being completed.
2. Training and technical assistance for assisting small water systems for developing a SWSMP is limited.
3. SWSMP budget information is lacking (no money).

Possible Follow-Up Actions

1. Revise the SWSMP Guide so it is more understandable to utility owners/operators (currently scheduled for 03)
2. Through the use of third parties, the state should provide training and technical assistance to utilities completing the FVT.
3. Explore / improve restructuring options for small water systems that are not viable (guidelines, funding, regulatory).

Title of Program

Financial Viability

Supporting Documents

Financial Viability Manual

Basis of Authority

43.20 RCW
246-290 WAC

Purpose

This program is designed to provide community Group A water systems with less than 1,000 connections with information necessary to successfully complete the financial viability section of its water system plan. The program includes four tests that examines the system's budget, operating cost reserve, emergency reserve, and affordability of its water rates. Also information on setting up an operating cash reserve, emergency reserve, replacement reserve, and water rate design, has been included in the DW's Financial Viability Manual.

Status of Implementation

Based on discussion with DW's Planning Staff, the four tests are not being completed in a consistent manner. Most of the time test 1-Budget has been the focus of the utilities efforts.

Current Issues

1. Because of the difficulty utilities are having completing the tests, due to financial problems, consistent application during the DW's review of the water system plan is lacking.
2. Regulatory authority for requiring reserve accounts is lacking.
3. The water rate affordability benchmark of 1 ½ percent of the median household income is subjective and has been controversial.

Possible Follow-Up Actions

1. The State should examine its authority to regulate water systems financial viability (i.e. require reserve accounts).
2. The State should reexamine its water rate affordability benchmark and determine if it should be increased.
3. The FVT manual should be updated and written in a more user-friendly format.
4. Through the use of third parties the State should provide training and technical assistances to utilities completing the FVT.

Title of Program

Public Water System Coordination Act

Supporting Documents

Coordination Act Handbook
Abbreviated Coordinated Water System Plan Guidelines

Basis of Authority

70.116 RCW
246-293 WAC

Purpose

A new water system cannot be created unless authorized by Department of Health. This approach reinforces current Division financial viability and SMA requirements. Also for existing systems experiencing issues related to financial viability, the Coordination Act Program requires exploring "coordinated" solutions to improving system sustainability.

Status of Implementation

To date, there are 21 critical water supply service areas that have developed a CWSP. These plans cover most of the urbanizing areas in Western Washington and several growth centers in Eastern Washington. Remaining areas of the State have not taken advantage of developing an abbreviated CWSP. Many of the CWSP's that have been developed, are outdated.

Current Issues

1. Many CWSP's need to be updated in order to incorporate SMA and financial viability elements (resource issue).
2. Counties currently without a CWSP have not assessed the advantages of developing an abbreviated CWSP (resource issue).
3. Counties with approved CWSP's are not providing the resource to maintain an adequate level of implementation.

Possible Follow-Up Actions

1. In order to improve the affordability and sustainability of existing water systems and promote financial viability before new systems are created, all counties should either update their CWSP (if needed) or consider developing an abbreviated CWSP. This could be accomplished by providing increased technical assistance and / or additional regulatory requirements.
2. Identify specific timely and reasonable criteria for determining water system request for service.

Title of Program

Operating Permit

Supporting Documents

None

Basis of Authority

70.119A.100 RCW
246-294-040 WAC

Purpose

New and existing water systems must obtain an operating permit in order to assure that they are providing safe and reliable drinking water. The department may impose permit conditions, requirements for system improvements, and compliance schedules. Financial Viability is a key activity for both new and existing water systems.

Status of Implementation

Most Group A water systems have obtained an operating permit. For systems that have been evaluated over 95 percent are in substantial compliance with permit requirements. The remaining 5 percent are not in substantial compliance and have been issued a red operating permit. Currently DW administers the operating permit financial viability requirements by linking it to the WSP. (See current issues under WSP Program).

Current Issues

When assessing water system adequacy when issuing subdivision approvals and building permits or lending money for home loans, local governments and lending institutions are not consistently using the OP Program Compliance methodology.

Because no WSP is required by non-expanding small water systems or they do not have a plan, financial viability requirements are not addressed by DW staff when determining the appropriate permit category.

Possible Follow-Up Actions

1. See possible follow-up actions under WSP Program.
2. Consider exploring separate financial viability requirements (not linked to WSP Program) for the OP.
3. Consider improving the relationships with local governments and lending institutions with regard to OP Program and system adequacy.

Title of Program

SMA

Supporting Documents

SMA Guidelines

Basis of Authority

70.119A.060(2) RCW
70.116.134 RCW
246-295 WAC

Purpose

70.119A.060

DOH will not approve the creation of a new system (Group A and Group B), unless that system is owned or managed and operated by an approved SMA. If a SMA is not available, the system approval is conditioned upon the periodic review of the systems operational history to determine its ability to meet the DW's financial viability and other operating requirements. If the DW determines that financial viability operating requirements are not being meet, the DW may direct the system to an approved SMA for ownership or management and operations.

70.116.134

DOH establishes criteria for designating individuals or water purveyors as qualified satellite system management agencies. The criteria shall include demonstration of financial integrity and operational capability. Each county shall identify potential satellite system management agencies. The secretary shall approve satellite system management agencies. Approved satellite system management agencies shall be reviewed periodically by DOH. DOH may assess reasonably fees to process applications for initial approval and for periodic review of satellite system management agencies.

Status of Implementation

To date, DW has approved 87 SMA's that own, manage, and operate 900 plus systems statewide.

Current Issues

1. New systems are being created without prior coordination with an approved SMA.
2. The condition of obtaining the services of an SMA, if financial viability and other operating requirements are not met, is not being identified at the time of system approval or enforced after the system has been approved.
3. The incentive to take over the ownership or manage and operation of an existing small water system is lacking because of ongoing financial viability and operational problems.
4. Existing SMA's have not been designated as receivers for failing systems.
5. All counties have not identified SMA's.

Possible Follow-Up Actions

1. Improve compliance with current SMA requirements (resource issue).
2. Develop additional incentives for becoming an approved SMA.
3. Develop incentives or remove barriers (i.e. funding, water rights, etc.) for SMA to take over the ownership or management and operating of existing small water systems.
4. Develop legislation to revise OP fee schedule to implement a non-compliance surcharge for red OP.
5. Develop legislation to enable DOH to mandate failing systems to receive SMA management and operation service.
6. Amend rules (WAC) to expand scope and authority of DOH's periodic review / evaluation of SMAs and streamline approval modification / revocation process.
7. Develop clarification on financial viability for SMA Program.
8. Work with counties in identifying SMAs.

Title of Program

Receivership

Supporting Documents

None

Basis of Authority

43.70.195 RCW

Purpose

Water systems that are failing and are having major difficulty meeting basic operational and financial requirements can be placed in receivership by an action of the local health officer or the DOH. DOH shall also maintain a list of interested and qualified individuals and entities desiring to become a receiver. The system shall not be returned to the system owners until adequate performance and financial viability requirements are in place, in order to ensure the ongoing proper operation of the system. The court shall appoint the county if there are no other persons willing and able to be named as receiver. The county intern may designate/contract with a qualified individual or entity to run the system and make necessary improvements.

Status of Implementation

To date, only limited receivership actions have been taken. Two counties have been involved with receivership and have ended up being responsible for a failing system. Several counties have agreements with water systems to become the responsible operators/owners on behalf of the county when receivership actions are taken. To date, only five receivership actions have been taken statewide. DW has a list of 10 willing and able receivers.

Current Issues

1. Because receivership can be a very costly, long, and involved process (resource intense), there has been minimal application.
2. Because the benefits of being named a receiver are limited, obtaining a willing and able receiver is difficult.
3. Many counties have not identified individuals and entities that could assist the county when receivership actions are proposed.
4. DOH has not maintained a current list of willing and able receivers.

Possible Follow-Up Actions

1. Develop legislation that would expedite receivership actions and make it more beneficial to being named a receiver.
2. Increase the level of effort in informing counties of understanding their obligations under current receivership requirements.
3. Update the list of willing and able receivers and offer technical assistance to individuals, entities, counties, etc. requesting information on receivership.

Title of Program

SRF Program

Supporting Documents

2003 Program Guidelines

Basis of Authority

70.119A RCW
246-296 WAC

Purpose

A federal funding program that directs funds to state to be used for low interest loans for drinking water infrastructure improvements in order to improve the long-term health and economic vitality of local communities. DOH and the Public Works Board, and the Board's Administrative Agent, the Department of Community, Trade and Economic Development administer Washington's programs jointly. Criteria for securing a loan include both the ability to repay the loan and the ability to secure the loan. Both the WSP and the SWSMP are used as tools in making this assessment.

Status of Implementation

Nearly $37 million was directed to water systems for drinking water infrastructure improvements in 2002. 25 percent of loans executed to date solved public health problems that would have resulted in serious compliance actions if they had not been addressed with capital improvements. Loans executed to date have ranged from $15,300 to $4 million and over 40 percent have been made to privately owned water systems.

Current Issues

1. Even with low interest loan availability, some disadvantaged communities have not been able to take advantage of the funding program. This has resulted in postponement of needed infrastructure improvements.
2. It is not clear whether privately owned water systems can receive "principle forgiveness" (similar to grants).

Possible Follow-Up Actions

1. DOH should review current polices related to principle forgiveness to economically distressed counties and disadvantaged communities and determine if additional SRF funds should be directed to these classes of systems.
2. DOH should determine if they have the legal ability to award principle forgiveness to privately owned water systems.
3. DOH should develop a policy on the application of principle forgiveness (should principle forgiveness apply to the entire system or just those individuals through reduced rates) who meet the disadvantage community criteria.

Appendix H: List of Recommendations Voted on May 13, 2003
Affordability and Sustainability Subcommittee Meeting

Water System Plan

1. Additional state resources allocated to affordability and sustainability technical assistance and plan reviews (FTE and $).
2. Additional state involvement in utility rate setting (i.e. guidance documents, laws / regulations).
3. Amend regulations to require water system plan approval by the elected officials of the system.
4. Require that elected officials approve rate increases before the WSP is submitted. That item could be part of the approval checklist (i.e. minutes of meeting at which new rates were voted upon and accepted).
5. The water system should be required to obtain a UTC review of their financial viability before submitting a WSP.
6. DOH engineers should work with water system personnel rather than consultant. *
7. DOH will enforce WSP. *

Small Water System Management Program

1. Revise the SWSMP Guide so it is more understandable to utility owners/operators (currently scheduled for 03).
2. Expand the use of third parties, the state should provide training and technical assistance to utilities completing the FVT.
3. Explore / improve restructuring options for small water systems that are not viable (guidelines, funding, regulatory).
4. DOH should tie (enforce) SWSMP to operating permit color. *

Financial Viability

1. The State should examine its authority to regulate water systems financial viability (i.e. require reserve accounts).
2. The State should reexamine its water rate affordability benchmark and determine if it should be increased.
3. The FVT manual should be updated and written in a more user-friendly format.
4. Through the use of third parties the State should provide training and technical assistances to utilities completing the FVT.
5. Raise the state water rate affordability benchmark of 1 ½ percent to federal level.

Public Water System Coordination Act

1. All counties should either update their CWSP (if needed) or consider developing an abbreviated CWSP. This could be accomplished by providing increased technical assistance and / or additional regulatory requirements.
2. Identify specific timely and reasonable criteria for determining water system request for service.
3. DOH should fund CWSP updates. *

Operating Permit

1. Consider exploring separate financial viability requirements (not linked to WSP Program) for the OP.
2. Consider improving the relationships with local governments and lending institutions with regard to OP Program and system adequacy.
3. Develop legislation to revise OP fee schedule to implement a non-compliance surcharge for red OP.
4. DOH should work with counties to have counties add financial viability to their VA type checklist for approving water system availability.
5. DOH should work with counties to require SWSMP for all non-expanding systems before they get permit.

DOH should send each county a list of systems that do not get green OP's to "red flag" issuance of building and sub division permits **

Satellite Management

1. Improve compliance with current SMA requirements (resource issue).
2. Develop additional incentives for becoming an approved SMA.
3. Develop incentives or remove barriers (i.e. funding, water rights, etc.) for SMA to take over the ownership or management and operating of existing small water systems.
4. Develop legislation to enable DOH to mandate failing systems to receive SMA management and operation service.
5. Amend rules (WAC) to expand scope and authority of DOH's periodic review / evaluation of SMAs and streamline approval modification / revocation process.
6. Develop clarification on financial viability for SMA Program.
7. Work with counties in identifying SMAs.
8. Continue and improve methods of recordkeeping and reporting progress on capacity-building programs (consistent with SDWA capacity development provisions) and reporting progress in achieving small system cooperation and consolidation to EPA and the NDWAC. EPA and States should use this information to develop and maintain an effective small system cooperation database that can be used to promote cooperation.
9. Offer meaningful incentives for assessing whether cooperative efforts are feasible and limiting financial and technical support for individual system, compliance solutions to small systems that have assessed cooperative options and found them to be infeasible or not cost-effective.

10. Assist to community groups, system operators, and owners in the development of governance, advisory, or other participatory vehicles to ensure a continued role for these stakeholders when cooperative solutions are implemented. *(A Majority Recommendation, 16-2)*
11. OP issuance should be based on required written verification of service from an approved SMA, just like water availability letters.
12. DOH should send letter of inquiry to system users (board or individuals) with a list of issues that can be answered yes, no or don't know. This might assist with weeding out poorly managed SMAs.
13. DOH should regularly request opinions from counties regarding performance of SMAs within their jurisdictions.
14. Incentives/removal of barriers should not be delayed. If something isn't done soon, we will have many more systems that may require receivership process.
15. State approved SMA/contract operators can operate in any county. *

Receivership

1. Develop legislation that would expedite receivership actions and make it more beneficial to being named a receiver.
2. Increase the level of effort in informing counties of understanding their obligations under current receivership requirements.
3. Update the list of willing and able receivers and offer technical assistance to individuals, entities, counties, etc. requesting information on receivership.
4. DOH should explore options for funding receivers. *

State Revolving Funding Program

1. DOH should review current polices related to principal forgiveness to economically distressed counties and disadvantaged communities and determine if additional SRF funds should be directed to these classes of systems.
2. DOH should determine if they have the legal ability to award principal forgiveness to privately owned water systems.
3. DOH should develop a policy on the application of principal forgiveness (should principal forgiveness apply to the entire system or just those individuals through reduced rates) who meet the disadvantage community criteria.
4. SRF funding should be made available as construction draws. *
5. If DOH determines that principal can be forgiven in some situations, it should be only one time for a given system and then only if the system can demonstrate that it will be sustainable. *
6. Sweat equity should be eligible for SRF and other funding. *

Conduct focused outreach programs to regional groups directly or in conjunction with others, and allowing cooperation expenditures by these groups to be considered in federal and State financial assistance programs. **

Real Estate Transactions

1. Identify Drinking Water public disclosure requirements and put into law.

Training

1. Consider state role in creating an incentive for participation in the cap program.
2. Provide funding for third party Management Circuit Rider through DOH.
3. Make funding available thru DWSRF Small System set aside.
4. Establish more flexible CEU time requirements. *

Utility and Transportation Requirements

1. Develop a coordinated effort between UTC and DOH in improving the financial viability oversight of private water systems (update MOU, statute changes, etc.).
2. Increase UTC resources to hire staff & fund review program.
3. Require FV review by UTC (if this issue is not covered in a SWSMP) before issuing OP.

Misc.

1. Evaluate legal and programmatic tools used in other states for possible use in Washington.
2. When a State decides whether to allow a variance, it should consider the "quantum leap" and "rate shock" phenomena.
3. In addition, when making variance decisions, States should consider the cumulative impacts of multiple regulations and other cost-raising factors (e.g., infrastructure and security) that may affect a particular system.
4. When a State is considering whether to allow a variance, a strong effort should be made through a meaningful local public education and local public participation effort, to ensure consumers are informed and understand variance technology does not result in water quality that meets EPA standards, the implications of the two-tier phenomenon, and options they may have.
5. When examining the cost of regulatory compliance at the national or State level, system flow capacity optimization (achieved through control of water leakage, metering, rate structure, and facility design) should be considered prior to developing the cost of treatment technologies and/or cooperative solutions. *(A Consensus Recommendation)*
6. DOH should research the income levels associated with small systems in different parts of the state to better define the affordability problem. *

* Recommendation not on original list, but added during the May 13, 2003 meeting prior to vote.

** Recommendation on original list, but removed prior to vote with concurrence of all members present at meeting.